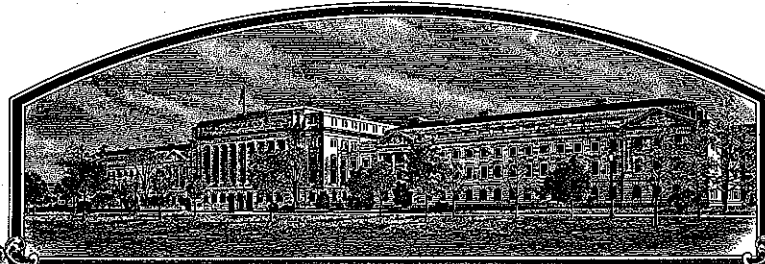


No.

200600259



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Seminis Vegetable Seeds, Inc.*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'CHI1504001'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifteenth day of April, in the year two thousand and eight.*

Attest:

*[Signature]*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*[Signature]*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.


Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>Seminis Vegetable Seeds, Inc.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME		3. VARIETY NAME <b>CHI1504001</b>	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>2700 Camino del Sol Oxnard CA 93030-7967</b>		5. TELEPHONE (include area code) <b>(805) 647-1572</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200600259</b> FILING DATE <b>Aug 3, 2006</b>	
		6. FAX (include area code) <b>(805) 918-2545</b>			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>California</b>		9. DATE OF INCORPORATION <b>4 June 1962</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Carol Miller Seminis Vegetable Seeds, Inc. 37437 State Hwy 16 Woodland CA 95695</b>				10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Marcel Bruins (marcel.bruins@seminis.com) Seminis Vegetable Seeds, Inc. P.O. Box 97, NL-6700 AB Wageningen, The Netherlands</b>	
11. TELEPHONE (Include area code) <b>(530) 669-6274</b>		12. FAX (Include area code) <b>(530) 669-6112</b>		13. E-MAIL <b>carol.l.miller@seminis.com</b>	
14. CROP KIND (Common Name) <b>Tomato</b>		16. FAMILY NAME (Botanical) <b>Solanaceae</b>		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <b>YES NO</b> IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Lycopersicon esculentum</b>		17. IS THE VARIETY A FIRST GENERATION HYBRID? <b>YES NO</b>		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <b>YES (if "yes", answer items 21 and 22 below) NO (if "no", go to item 23)</b>	
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <b>YES NO</b> IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <b>YES NO</b> IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>Carol L. Miller</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>PVP Specialist</b>	DATE <b>8/1/06</b>	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

**GENERAL INSTRUCTIONS:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to reproduce the variety. Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

Plant Variety Protection Office  
Telephone: (301) 504-5518 FAX: (301) 504-5291  
General E-mail: PVPOMail@usda.gov  
Homepage: <http://www.ams.usda.gov/science/pvpo/PVPIndex.htm>

200600259

**SPECIFIC INSTRUCTIONS:**

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

**ITEM**

- 19a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
  - (2) the details of subsequent stages of selection and multiplication;
  - (3) evidence of uniformity and stability; and
  - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

N/A

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Sale of hybrid 'Exxtasy': NL 01-Oct-04; GB 02/01/05; DK 01-Nov-05; DE 01-Dec-05; FI 01-Jan-06.

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

EU: PBR Filed 19-Nov-04, Application #2004/2278

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**Exhibit A****Origin and breeding history of Tomato, CHI1504001**

The tomato parent line CHI1504001 was developed from the basic material of BS 01248067. The variety BS 01248067 (aka: SVR 01248067) was a trial hybrid of Bruinsma (which later became part of Seminis Vegetable Seeds, Inc.) and was available for commercial purposes in the European glasshouse tomato market during the years of 1994-1995. Due to limited interest in the variety, BS 01248067 was discontinued shortly thereafter. The origin of this line can be traced back to a combination of varieties tried and later sold in the market as DRS 3423 (of De Ruiter Seeds), E192 (of Enza Zaden), and inbred breeding lines from the program of Bruinsma/Seminis (which were not available for commercial purposes). This information reflects all that we know pertaining to the pedigree of this line; no additional records or information are available.

CHI1504001 was developed using the pedigree selection method. During the development process, single plant selections were made to fix disease claims and ensure adaptation to a heated greenhouse climate and growing conditions. The orange color, in combination with disease claims and well tasting fruits, makes this a unique tomato in its class.

Spring 1994	Hybrid SVR 01248067 planted and self pollinated fruits are harvested.
Autumn 1994	Planted F2, several individual plants selected for increased brix.
Spring 1995	Planted F3, several individual plants selected for regular clusters.
Autumn 1995	Planted F4, several individual plants selected for increased brix.
Spring 1997	Planted F5, several individual plants selected for fix ToMV, Vert, LM.
Spring 1998	Planted F6, several individual plants selected for fix plant vigor.
Autumn 1998	Planted F7, several individual plants selected for fix Fusarium race 1 and 2.
Spring 1999	Planted F8, several individual plants selected for Fusarium crown and root rot (FCRR) resistant lines.
Spring 2002	Planted F9, line with confirmed (FCRR) bulk harvest of self pollinated fruits.

Selection criteria for the development of CHI1504001 was aimed to achieve a line with good commercial properties, full disease resistance pattern, and a Brix measurement indicative of good eating quality. Disease resistance claims were verified by the Seminis phytopathology department in Wageningen, The Netherlands and confirmed in official NAK tests in The Netherlands.

Observations made during the 2004 and 2005 growing seasons, when this line was used as a parent in hybrid seed production, confirmed that 'CHI1504001' was uniform and stable within commercially acceptable limits. As is true with other tomato inbred lines, a very small percentage of variants can occur within commercially acceptable limits for many characteristics during the course of repeated multiplication. No genetic variants are known to occur and, to date, this inbred line has been observed to be completely uniform and stable for three generations, under heated greenhouse conditions.

## Exhibit B

#200600259

### Statement of Distinctness for Tomato, CHI1504001

'CHI1504001' is a unique orange-colored cocktail tomato inbred. The orange color in a cocktail fruit is not very common in tomatoes and little comparison material in the heated greenhouse segment is available.

To our knowledge, the variety which most closely resembles 'CHI1504001' is 'Aranca' (Enza Zaden).

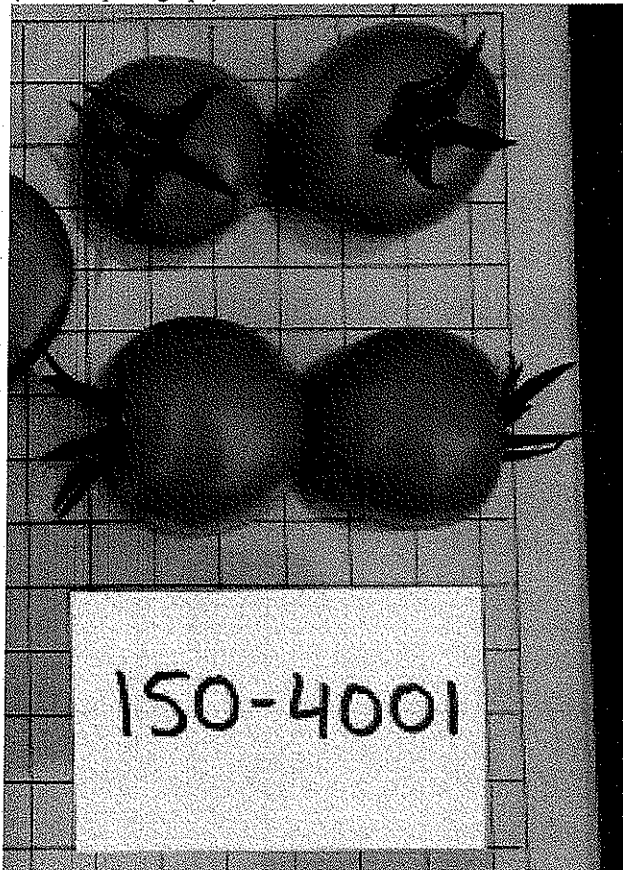
The characteristic that most readily distinguishes 'CHI1504001' from 'Aranca' includes, but may not be limited to, the mature fruit color. At full maturity, the fruit of 'CHI1504001' are orange (RHS N25A), whereas the full ripe fruit of 'Aranca' are red (RHS N45A). See photos 1 and 2 below.

#### Photo 1:

Mature Fruit Color:

'CHI1504001' is orange (RHS N25A)

(Seminis photograph)

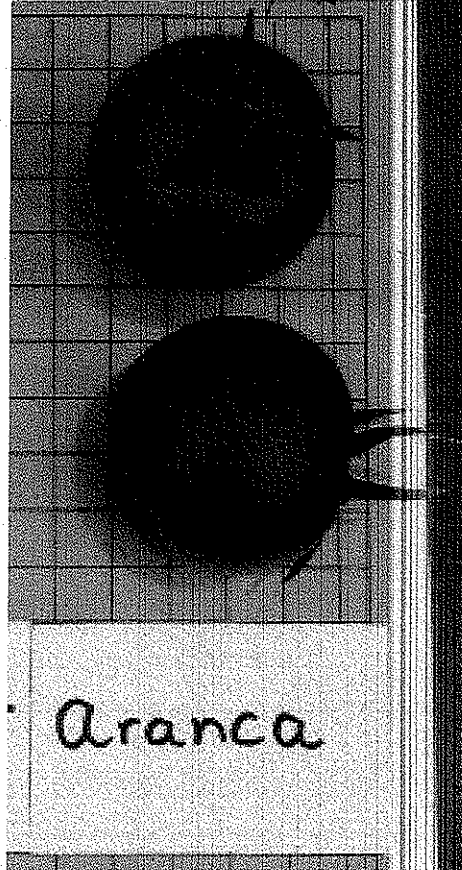


#### Photo 2:

Mature Fruit Color:

'Aranca' is red (RHS N45A)

(Seminis photograph)



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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY  
TOMATO (*Lycopersicon esculentum* Mill.)

NAME OF APPLICANT (S) Seminis Vegetable Seeds, Inc.	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME 'CHI1504001'
ADDRESS (Street and No., or RD No., City, State, Zip Code, and Country) 2700 Camino del Sol Oxnard, CA 93030		PVPO NUMBER 200600259

Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeros when necessary (e.g., 0.9 or 0.81, etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicated by check whether trial data are from green house or ~~field~~ planting. Trials ~~direct-seeded~~ or transplanted/staked or ~~unstaked~~. Give locations and dates of seeding and transplanting here: Honselersdijk, Netherlands - Spring 2005

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST. IF AT ALL POSSIBLE, ENTER THE NUMBER OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.

- |                  |                       |               |  |
|------------------|-----------------------|---------------|--|
| 1 = Ace 55 VF    | 7 = Homestead 24      | 13 = Red Rock | 19 = VF 134                                  |
| 2 = Campbell 37  | 8 = Marglobe          | 14 = Roma VF  | 20 = US 28                                   |
| 3 = Chico III    | 9 = Murietta          | 15 = Rutgers  | 21 = VF 145 B 7879                           |
| 4 = Flora Dada   | 10 = New Yorker       | 16 = Sunray   | 22 = Other (Specify) <u>Spikey (Seminis)</u> |
| 5 = Florida MH-1 | 11 = Ohio MR-13       | 17 = Tropic   | <u>Aranca (Enza Zaden)</u>                   |
| 6 = Heinz 1350   | 12 = Red Cherry Large |               |  |

## 1. SEEDLING

2 Anthocyanin in hypocotyl of 2 - 15 cm seedling: 1 = Absent 2 = Present

1 Habit of 3 - 4 week old seedling: 1 = Normal 2 = Compact

## 2. MATURE PLANT (at maximum vegetative development)

     CM Height Indefinite

1 Growth: 1 = Indeterminate 2 = Determinate

2 Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic

2 Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

2 Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

## 3. STEM

- 2 Branching: 1 = Sparse ('Brehm's Solid Red', 'Fireball') 2 = Intermediate ('Westover') 3 = Profuse ('UC 82')
- 1 Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent
- 3 No. of nodes between first inflorescence: 1 = 1-4 2 = 4-7 3 = 7-10 4 = 10 or more
- 3 No. of nodes between early (1<sup>st</sup> - 2<sup>nd</sup>, 2<sup>nd</sup> - 3<sup>rd</sup>) inflorescences. 3 No. of nodes between later developing inflorescences.
- 2 Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or wooly

4. LEAF (mature leaf beneath the 3<sup>rd</sup> inflorescence)

- 1 Type: 1 = Tomato 2 = Potato ('Trip-L-Crop') 1 Morphology (choose illustration at the end of this form that is most similar)
- 2 Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, sps. Toward base
- 2 Marginal rolling or wiltiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong
- 3 Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season
- 2 Surface of major leaflets: 1 = Smooth 2 = Rugose (bumpy or veiny)
- 2 Pubescence: 1 = Smooth (no long hairs) 2 = Normal 3 = Hirsute 4 = Wooly

5. INFLORESCENCE (make observations on 3<sup>rd</sup> inflorescence)

- 1 Type: 1 = Simple 2 = Forked (2 major axes) 3 = Compound (much branched)
- 20 Number of flowers in inflorescence. Average
- 1 Leafy or "running" inflorescences: 1 = Absent 2 = Occasional 3 = Frequent

## 6. FLOWER

- 1 Calyx: 1 = Normal, lobes awl-shaped 2 = Macrocalyx, lobes large, leaflike 3 = Fleshy
- 2 Calyx-lobes: 1 = Shorter than corolla 2 = Approx. equalling corolla 3 = Distinctly longer than corolla
- 1 Corolla color: 1 = Yellow 2 = Old gold 3 = White or tan
- 2 Style pubescence: 1 = Absent 2 = Sparse 3 = Dense
- 1 Anthers: 1 = All fused into tube 2 = Separating into 2 or more groups at anthesis
- 1 Fasciation (1<sup>st</sup> flower of 2<sup>nd</sup> or 3<sup>rd</sup> inflorescence): 1 = Absent 2 = Occasionally present 3 = Frequently present

7. FRUIT (3<sup>rd</sup> fruit of 3<sup>rd</sup> or 3<sup>rd</sup> cluster) For the first 5 characters below, match your variety with the most similar illustration on pages at the end of this form.

- 3 Typical fruit shape 1 Shape of transverse section 1 Shape of stem end
- 2 Shape of blossom end 1 Shape of pistil scar

1 Abscission layer: 1 = Present (pedicellate) 2 = Absent (jointless)

1 Point of detachment of fruit at harvest: 1 = At pedicel joint 2 = At calyx attachment

04 MM length of pedicel (from joint to calyx attachment) 38

025 MM length of mature fruit (stem axis)

035 MM length, check var. no.

22

028 MM diameter of fruit at widest point

036 MM diameter, check var. no.

22

016 G weight of mature fruit

028 G weight, check var. no.

22

1 No. of locules: 1 = Two 2 = Three and four 3 = Five or more

1 Fruit surface: 1 = Smooth 2 = Slightly rough 3 = Moderately rough or ribbed

1 Fruit base color (mature-green stage):

1 = Light green ('Lanai', 'VF 145-F5') 2 = Light gray-green 3 = Apple or medium green ('Heinz 1439 VF') 4 = Yellow green 5 = Dark green

2 Fruit pattern (mature-green stage): 1 = Uniform green 2 = Green-shouldered 3 = Radial stripes on sides of fruit

## 7. FRUIT (continued)

- 1 Shoulder color if different from base: 1 = Dark green 2 = Grey green 3 = Yellow green
- 3 Fruit color, full-ripe: 1 = White 2 = Yellow 3 = Orange 4 = Pink 5 = Red 6 = Brownish 7 = Greenish 8 = Other (specify) \_\_\_\_\_
- 4 Flesh color, full-ripe: 1 = Yellow 2 = Pink 3 = Red/Crimson 4 = Orange 5 = Other (specify) \_\_\_\_\_
- 1 Flesh color: 1 = Uniform 2 = With lighter and darker areas in walls
- 1 Locular gel color of table-ripe fruit: 1 = Green 2 = Yellow 3 = Red
- 2 Ripening: 1 = Blossom-to-stem end 2 = Uniform
- 2 Ripening: 1 = Inside out 2 = Uniformly 3 = Outside in
- 1 Stem scar size: 1 = Small ('Roma') 2 = Medium ('Rutgers') 3 = Large
- 1 Core: 1 = Coreless (absent or smaller than 6x6 MM) 2 = Present
- 2 Epidermis color: 1 = Colorless 2 = Yellow
- 1 Epidermis: 1 = Normal 2 = Easy-peel
- 2 Epidermis texture: 1 = Tender 2 = Average 3 = Tough
- 1 Thickness of pericarp 1 Thickness of pericarp. Check var. no. 22 (SPICY)
- 2 Anthocyanin in hypocotyl of 2 - 15 mc seedling: 1 = Absent 2 = Present 1 Habit of 3 - 4 week old seedling: 1 = Normal 2 = Compact

## 8. RESISTANCE TO FRUIT DISORDER (Use code: 0 = Unknown 1 = Susceptible 2 = Resistant)

- 2 Blossom end rot 2 Catface 0 Fruit pox 0 Zippering
- 2 Blotchy ripening 2 Cracking, concentric 1 Gold fleck 0 Other (specify) N/A
- 0 Bursting 1 Cracking, radial 0 Graywall

## 9. DISEASE AND PEST REACTION (Use code: 0 = Unknown 1 = Susceptible 2 = Resistant) NOTE If claim of novelty is based wholly or in substantial part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the applicant variety, and reaction of well-known check varieties grown in the trial (identified by name).

## Viral Diseases:

- 0 Cucumber mosaic 2 Tobacco mosaic, Race 0 0 Tobacco mosaic, Race 2<sup>2</sup>
- 0 Curly top 2 Tobacco mosaic, Race 1 0 Tomato spotted wilt
- 0 Potato-Y virus 2 Tobacco mosaic, Race 2 0 Tomato yellows
- 0 Blotchy ripening 0 Cracking, concentric 0 Gold fleck
- 0 Other virus (specify) N/A

## Bacterial Diseases:

- 0 Bacterial canker (*Corynebacterium michiganense*) 0 Bacterial spot (*Xanthomonas vesicatorum*)
- 0 Bacterial soft rot (*Erwinia carotovora*) 0 Bacterial wilt (*Pseudomonas solanacearum*)
- 0 Bacterial speck (*Pseudomonas tomato*) 0 Other bacterial disease (specify) N/A

## Fungal Diseases:

- 0 Anthracnose (*Colletotrichum* spp.) 0 Leaf mold, Race 1 (*Cladosporium fulvum*)
- 0 Brown root rot or corky root (*Pyrenochaeta lycopersici*) 0 Leaf mold, Race 2
- 0 Collar rot or stem canker (*Alternaria solani*) 0 Leaf mold, Race 3
- 0 Early blight defoliation (*Alternaria solani*) 2 Leaf mold, other races (specify) A + B + C + D + E
- 2 Fusarium wilt, Race 1 (*F. oxysporum f. lycopersici*) 0 Nailhead spot (*Alternaria tomato*)
- 2 Fusarium wilt, Race 2 0 Septoria leafspot (*S. lycopersici*)
- 0 Fusarium wilt, Race 3 0 Target leafspot (*Corynespora cassicola*)



## 9. DISEASE AND PEST REACTION (continued)

## Fungal Diseases:

0 Gray leaf spot (*Stemphylium* spp.)2 Verticillium wilt, Race 1 (*V. albo-atrum*)0 Late blight, Race 0 (*Phytophthora infestans*)0 Verticillium wilt Race 20 Late blight, Race 12 Other fungal disease (specify) Fusarium oxysporum f.sp. & Radicis lycopersici

## Insects and Pests:

0 Colorado potato beetle (*Leptinotarsa decemlineata*)0 Tomato hornworm (*Manduca quinquemaculata*)0 Southern root knot nematode (*Meloidogyne incognita*)0 Tomato fruitworm (*Heliothis zea*)0 Spider mites (*Tetranychus* spp.)0 Whitefly (*Trialeurodes vaporariorum*)0 Sugar beet army worm (*Spodoptera exigua*)0 Other (specify) N/A0 Tobacco flea beetle (*Epitrix hirtipennis*)

## Pollutants:

0 Ozone0 Sulfur dioxide0 Other (specify) N/A10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS Suggested test methods may be found in "Tomato Products", 5<sup>th</sup> ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at least one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

	Submitted Variety	Check Variety <u>SPICY</u>	Check Variety	Check Variety
pH				
Titrateable acidity, as % citric				
Total solids (dry matter, seeds and skin removed)				
Soluble solids as °Brix				

## 11. PHENOLOGY Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculation in °C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

	Application Variety	Check Variety <u>SPICY</u>	Check Variety <u>Aranca</u>	Check Variety
Seeding to 50% flow (1 open on 50% of plants)	<u>49 DAS</u>	<u>51 DAS</u>	<u>49 DAS</u>	
Seed to once over harvest (if applicable)				

1 Fruiting season: 1 = Long ("Marglobe") 2 = Medium ("Westover") 3 = Short, concentrated ("VF 145") 4 = Very concentrated ("UC 82")2 Relative maturity in areas tested: 1 = Early 2 = Medium early 3 = Medium 4 = Medium late 5 = Late 6 = Variable  
(If relative maturity is known to differ by location or environment, please explain on separate sheet)3-4-08 LAC  
per correspondence

## 12. ADAPTATION If more than one category applies, list all in rank order.

2 Culture: 1 = Field 2 = Greenhouse2 Principle use(s): 1 = Home garden 2 = Fresh market 3 = Whole-pack canning 4 = Concentrated products5 = Other (specify) N/A1 Machine harvest: 1 = Not adapted 2 = Adapted\* See Note Regions to which adaptation has been demonstrated: \* All Regions + Greenhouse

1 = Northeast

2 = Mid Atlantic

3 = Southeast

4 = Florida

5 = Great Plains

6 = South-central

7 = Intermountain West

8 = Northwest

9 = California: Sacramento and Upper San Joaquin Valley

10 = California: Coastal Areas

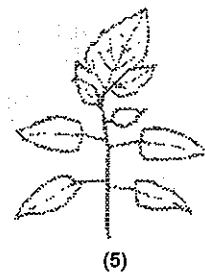
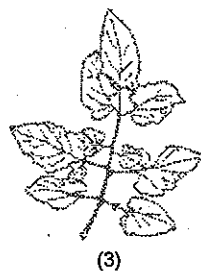
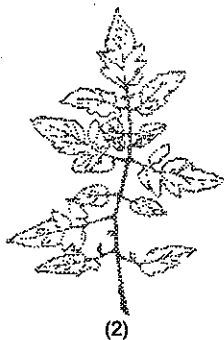
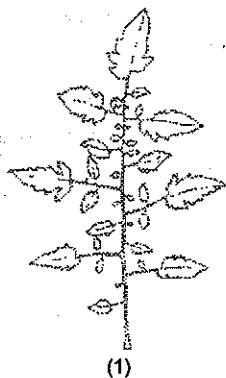
11 = California: Southern San Joaquin Valley &amp; deserts

## ILLUSTRATIONS OF TOMATO LEAF AND FRUIT CHARACTERISTICS

## 4. LEAF

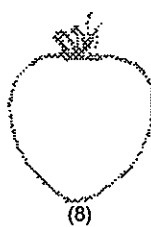
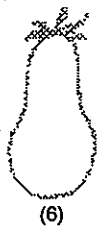
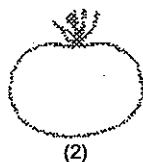
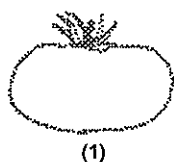
Morphology:

200600259



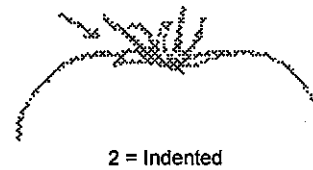
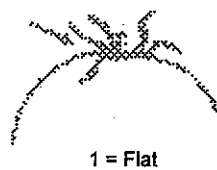
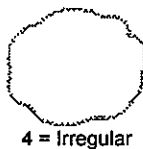
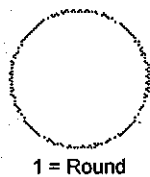
## 7. FRUIT

Typical fruit shape:



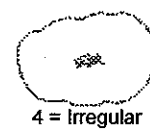
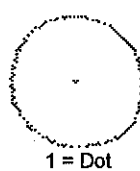
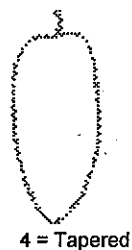
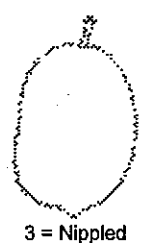
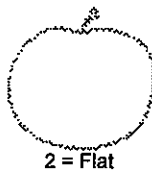
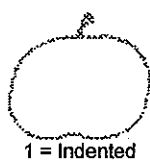
Shape of transverse section:

Shape of stem end:



Shape of blossom end:

Shape of pistil scar:



## REFERENCES

- Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition.
- Ware, G.W. & J.P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. Chapter 30, pp. 451-473, "Tomatoes".
- Warnock, S.J. 1978. Using Tomato Heat Units. Leaflet No. 6, Campbell Institute for Agricultural Research, Camden, NJ. 10 p.
- Webb, R.E., T.H. Barksdale, & A.K. Stoner, 1973. "Tomatoes", pp. 344-361, in: Nelson, R.R. (Ed.), Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.
- Young, P.A. & J.W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698..

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)  Seminis Vegetable Seeds, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  CHI1504001
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  2700 Camino del Sol Oxnard CA 93030-7967	5. TELEPHONE (Include area code)  (805) 647-1572	6. FAX (Include area code)  (805) 918-2545
7. PVPO NUMBER  200600259		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

The variety named in this application was developed by the Seminis Vegetable Seeds, Inc., employee (breeder) named below. Unless otherwise stated, all rights to the varieties developed by Seminis Vegetable Seeds, Inc. are assigned to the Company by agreement or by operation of law. No rights to such invention, discovery or development are retained by the employee(s).

Employee (Breeder): Arjan van Donk

Site Location: Honselersdijk, The Netherlands

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT F  
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) Seminis Vegetable Seeds, Inc.	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 2700 Camino del Sol Oxnard, CA 93030-7967	TEMPORARY OR EXPERIMENTAL DESIGNATION  VARIETY NAME CHI1504001
NAME OF OWNER REPRESENTATIVE (S) Carol L. Miller	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 37437 State Hwy 16 Woodland CA 95695	FOR OFFICIAL USE ONLY  PVPO NUMBER 200600259

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Carol L. Miller  
Signature

8/1/06  
Date